DOCUMENT RESUME

ED 195 017 EA 013 109

AUTHOR Goettel, Robert J.
TITLE The Use of Personal Income Data to Modify the Taxable Capacity of School Districts for the Apportionment of School Aid in New York State.
PUB DATE May 79
NOTE 40p.: Prepared for New York State Educational Conference Board. Chart 4 may be marginally legible.

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Elementary Secondary Education: *Equalization Aid: *Family Income: *Fiscal Capacity: Property Taxes: School Districts: State Aid: *Tax Rates
IDENTIFIERS New York

ABSTRACT

The purpose of this paper is to examine the implications of using personal income data in the New York state aid formula and to suggest ways in which such data could address specific inequities in the current formula. The first section of the paper is a brief review and evaluation of the Division of the Budget's study (in which estimates were made prior to the availability of 1977 state tax return data) of the effects of shifting to an income per pupil measure of fiscal capacity. Section 2 is a review of studies in which personal income and property wealth characteristics of New York school districts have been compared, a summary of the use of personal income measures in other states, and an initial look at possible distributional effects of using the income per pupil data derived from 1977 state income tax returns. The final section is an evaluation of the alternative income measures available, including recommendations for state aid policy. The two competing approaches to measuring fiscal capacity are the taxable capacity (or tax model) approach and the economic indicators (or income flow) approach. It is recommended that New York should rely on the taxable capacity approach. (Author/IRT)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED195017

U S DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

THE USE OF PERSONAL INCOME DATA TO MODIFY THE TAXABLE CAPACITY OF SCHOOL DISTRICTS FOR THE APPORTIONMENT OF SCHOOL AID IN NEW YORK STATE

Robert J. Goettel
May, 1979

Prepared for

NEW YORK STATE EDUCATIONAL CONFERENCE BOARD

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

R. J. Goettel

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

EA 013 109

EXECUTIVE SUMMARY

The purpose of this paper is to provide guidance to the Educational Conference Board regarding the question, Should personal income be used in determining the fiscal capacity of local districts? If some measure of personal income were used in place of or along with the Full Value of Real Property per Pupil, the measure of fiscal capacity currently used in New York's state aid formula, then additional general purpose aid would be targeted to those districts where the income of resident taxpayers is below the average for the State as a whole. Four basic questions are asked in order to address the issue of using personal income in the state aid formula.

1. Are there sufficient reasons to justify the use of personal income?

   - The fundamental rationale given by supporters of the use of income in measuring the fiscal capacity of school districts, is that the Full Value of Real Property of school districts often does not match the distribution of income, and that citizens pay taxes with income, not with property wealth. In New York State, analyses of U.S. Census data and State Department of Commerce data show that:

     - personal income is mildly associated with Full Value Per Pupil; some districts relatively high on one factor will be low on the other. For example, most large cities are above the state average on property value, but below on per capita income.

     - personal income is highly associated with the value of residential housing and the proportion of the tax base that is residential; the higher the income, the more likely one will own a higher priced home in a community that is predominately residential in character.

     - Thus, personal income is a good predictor of individual ability to pay property taxes.

   - Other sources of data about New York State suggest that:

     - property tax payments probably match quite well with income for most districts; generally low tax rates are associated with lower income levels. The exceptions are most urban districts and selected non-urban districts where incomes are relatively low, but expenditures and tax rates relatively high.

   - The use of personal income data in the state aid formula should be justified not on the statistical mismatch between income and property tax base, but on (a) whether low income levels are related to lower levels of educational services or quality, or (b) whether lower income citizens pay excess proportions of their income for education and other public services compared to upper income citizens.

The former is a pupil needs conception of equity and the latter a taxpayer conception. In New York State there are some districts with very low personal income that provide only a bare minimum education for their children. Children in such districts could be helped by a number of fiscal and administrative mechanisms. Some other districts have low or moderate levels of income and very high tax rates that nevertheless result in relatively low service levels. These districts could be helped by changing the way fiscal capacity is measured, or by special mechanisms such as an income-based High Tax Aid formula. Excess property tax burdens for individuals, an increasingly likely condition with the advent of Full Value Assessments, should be handled by a greatly expanded property tax circuit breaker program.

2. If personal income were used to measure fiscal capacity of school districts, how should it be used?

   - The concept of fiscal capacity that applies in New York State should be based on the property tax base, the only source of local revenue available to all school districts. If school districts were given the authority to tax personal income locally, then income would become a direct component of local fiscal capacity, and the measure used would be income per pupil.

   - Measures that reflect the distribution of personal income among district residents could be used to modify the Full Valuation of Real Property per Pupil measure of fiscal capacity used in the state aid formula. Such measures include:

     - median family income
     - percent of population below the poverty level

   - Personal income per pupil is not an appropriate measure of the distribution of income among district residents, so it should not be used to adjust the Full Valuation of Real Property per Pupil measure of capacity.

3. Should New York State income tax data be used as the source of personal income data to adjust Full Valuation of Real Property per Pupil or to allocate High Tax Aid?

   - The major shortcoming of New York State Income Tax data is that many low income citizens are not required to file income tax returns because Social Security and Railroad Retirement benefits as well as welfare benefits are not considered taxable income. Many of these citizens who are not required to file income tax returns pay local property taxes and, indeed, are eligible to file for excess property tax relief under New York's limited circuit breaker program. To the extent that these citizens are not counted in the distribution of personal income data now available for individual school districts, the relative income ability of districts will appear higher than, in fact, it is: districts with high concentrations of low income citizens will look wealthier than some districts with low concentrations.

- The school district personal income data for the 1977 tax year that have been available for the past several months used the income per pupil measure, an approach that would be appropriate only if local districts had the authority to tax income for educational purposes. In addition to being inconsistant with the concept of taxable capacity, the per pupil tax return characteristics of school districts match neither median family income for school districts based on the 1970 Census, nor 1974 per capita income data for counties and cities in New York.

- Median New York State gross income per return (including husbands and wives on joint returns) or per taxpayer should be compared to median family income for school districts based on the 1980 Census, to determine the feasibility of using income tax data either to adjust the measure of fiscal capacity, or to identify districts eligible for High Tax Aid. Therefore, personal income data should not be seriously considered for use in the state aid formula until after 1980 Census data are available for examination.

4. If tax return data were not used, what other alternatives exist for dealing with inequalities in the availability of educational resources or in tax burdens that are income related?

- A greatly expanded circuit breaker program (excess property tax relief) should be used to deal with inordinate tax burdens of individual taxpayers.

- A weighting formula based on Title I pupils could be used to target additional general purpose aid to districts, as is done in Illinois and Minnesota.

- The proportion of AFDC families in the total population, or AFDC children in the school enrollment could be used, as is done in Ohio.

- Full Value per Capita rather than per Pupil would have the same effect as personal income in targeting additional aid to urban districts, but not necessarily to high tax, low income non-urban districts.

- A number of specific formula provisions could be used to target additional aid to the same districts that would benefit from an adjustment based on personal income data. The effects of these adjustments could be evaluated against 1980 Census data.

- 1980 Census data could be used.

TABLE OF CONTENTS

Page

INTRODUCTION..... 1

SECTION 1: THE BUDGET DIVISION STUDY..... 3

SECTION 2: THE RELATIONSHIP BETWEEN INCOME PROPERTY VALUATION, EXPENDITURES AND TAX RATES..... 5

Previous Studies of New York State..... 5

Other States and Income in Measuring Fiscal Capacity....13

1977 Taxable Income Per Pupil in New York.....16

SECTION 3: USING PERSONAL INCOME DATA TO APPORTION STATE AID IN NEW YORK 20

Which Districts Should Be Helped?.....20

How Should Personal Income be Used in the Formula?.....22

APPENDIX A

APPENDIX B

INTRODUCTION

The property tax base is the primary source of local revenue for school districts in New York State. Like all but a handful of other states, New York uses Full Valuation Per Pupil as the measure of each district's capacity to support educational services. When an equalizing formula is used to apportion state aid to local districts as is the case in New York, low capacity districts receive more state dollars than higher capacity, more wealthy districts. A common complaint of critics of the exclusive use of Full Valuation Per Pupil is that property wealth is an inadequate and inequitable measure of local fiscal capacity. Critics contend that the residents of local districts pay property taxes with their personal incomes, so that a fairer and more accurate indicator of the capacity to pay for schools should be based on, or at least include, recognition of differences among districts in levels of personal income. Studies in a number of states support this view showing that many districts that appear to have substantial property wealth also have residents with relatively low incomes. Thus, the appearance of great capacity is misleading. Specifically, a measure of fiscal capacity that recognizes variations among districts in personal income is seen as a way to shift state aid from generally high income suburban school districts to hard pressed urban and rural areas.

Interest in the use of personal income data in New York's state aid formula has been increased by the ability since 1978 to match state income tax returns to school district location, and by current efforts to develop a long-term response to the decision in Levittown v. Nyquist.

The purpose of this paper is to examine the implications of using personal income data in the state aid formula and to suggest ways in which such data could address specific inequities in the current formula.

The paper is organized in three main sections. The first section is a brief review and evaluation of the Division of the Budget's study in which estimates were made prior to the availability of 1977 state tax return data of the effects of shifting to an income per pupil measure of fiscal capacity. Section 2 is (a) a review of studies in which personal income and property wealth characteristics of New York State school districts have been compared, (b) a summary of the use of personal income measures in other states, and (c) an initial look at possible distributional effects of using the income per pupil data derived from 1977 state income tax returns. The final section is an evaluation of the alternative income measures available including recommendations for state aid policy.

SECTION 1

THE BUDGET DIVISION STUDY

Chapter 309 of the Laws of 1977 required New York State taxpayers, for the first time, to record their school district of residence on their State income tax returns. The purpose of the study reported in August 1978 by the Budget Division's Education Study Unit (ESU) was to "...assess the merit of using personal income data in the determination of fiscal capacity for the apportionment of State aid."[1] Since actual data from the 1977 tax returns would not be available for analysis until late 1978 or early 1979, ESU instead used data from the 1970 Census to estimate the effects of using income tax data. The study assumed for analysis purposes that personal income would be totally substituted for the property tax base as the measure of the fiscal capacity of local school districts to support public elementary and secondary education. Therefore, the measure of fiscal capacity used to make the study's estimates was personal income per pupil, just as the measure currently used in the State aid formula is full valuation per pupil.

The ESU's estimates of the effects on various types of districts of shifting to personal income per pupil as the measure of fiscal capacity found that cities would lose aid and some of the wealthiest districts in New York would receive additional aid. The authors conclude that, "...personal income by itself will not be acceptable as a total substitute for full value as the measure of a district's wealth," due to (a) the direction of the shifts in aid that would occur and (b) the current state policy of allocating aid in inverse proportion to taxable wealth. It

---

[1] "Measuring the Wealth of School Districts for the Apportionment of Aid to Public Schools in New York State: Full Valuation vs. Personal Income," (Albany: Education Unit, New York State Budget Division, August 1978).

is noted that taxable income in New York represents only 70 percent of total personal income as defined by the Department of Commerce and that very careful auditing would be required before tax data could be used to apportion all general purpose state aid for education. It is suggested that a separate low income correction to apply to a limited number of districts be examined, perhaps as a variation on High Tax Aid. Such an adjustment might apply only to high tax, high cost districts.

The methodology used and the conclusions drawn by the study are reasonable in terms of the intent to assess the general effects of using state taxable income per pupil data in the current State aid formula. My initial examination of the first computer runs using the actual 1977 state income tax data to be reviewed later in this paper support the study's principal findings. Alternative ways to combine income data with property tax base data are not explored in the DOB study. For example, the possible effects of using median income per return or median taxable income per family were not considered. Measures such as these that reflect the distribution of income among school district residents may have very different distributional effects than income per pupil. Measures of aggregate income per unit of need seem to be based on the assumptions that (a) local districts have the authority to tax personal income and (b) that the distribution of personal income within a taxing jurisdiction is well matched to the assessed value of property. Concerns with those assumptions and alternative measures of personal income are the subjects of a later section of this paper.

SECTION 2

THE RELATIONSHIP BETWEEN INCOME AND PROPERTY VALUATION, EXPENDITURES AND TAX RATES

Studies about states other than New York have shown that the personal income characteristics of school district residents often are unrelated to the property wealth used to measure the fiscal capacity of districts.[2] Variations in personal income may be related to variations in both tax rates and per pupil expenditures -- the higher the income, the higher expenditures and tax rates, all other factors held constant. Our primary concern, however, is with the nature of these relationships in New York State.

Previous Studies of New York State

The general patterns in New York can be summarized as follows:

- Using per capita income, median family income (MFI) or the relative concentration of low income children to adjust the property tax base measure of fiscal capacity would shift state aid among districts. The concentration of low income children, or low income residents, probably would create the largest shifts.
- MFI is strongly related to average housing values.
- When district size is taken into account, higher MFI's are associated with higher portions of residential property, but unrelated to property valuation per pupil.
- The higher the property valuation per pupil, the lower the portion of the tax base that is residential property.
- New York's cities have higher property wealth per pupil than suburban and non-metropolitan districts, but lower per capita income. The "Big Five" cities all have lower per capita income than the remainder of their SMSA's. Rural (non-metropolitan) areas have the lowest per capita incomes.

One of the first examinations of the effect of using personal income in New York's aid formula was reported in the chapter by Callahan and Goettel in our Syracuse University Research Corporation study for the Fleischmann

---

[2] See for example Alan Odden, "Alternative Measures of School District Wealth," Journal of Eduction Finance, 1977, 2, 356-379; G. Ben Hubbard and Alan Hickrod, Illinois School Finance Research: Some Knowns and Unknowns, (Chicago: Midwest Administration Center, University of Chicago, 1977); and F. Farmer and J. Edmondson, Relationship of Principal Tax Bases for Public School Support in the Counties of the Eleven Western States, (Eugene: Bureau of Educational Research and Service, University of Oregon, 1969).

Commission.[3] We looked at the effect on the distribution of state aid to counties using per capita property valuation, per capita income and a composite of the two capacity measures. The shifts in aid that occurred were most dramatic in Nassau and Westchester counties where, in the late 1960's, the property wealth per capita was virtually identical, but where income per capita was very different. Using the aid ratio formula in effect in 1969, Nassau County's state aid would have been 20 percent higher under an income measure of capacity and Westchester County would have received 20 percent less aid. New York City's per capita income was identical to the state average, while per capita property wealth was 40 percent higher than the state average.

The Budget Division's 1978 study compared 1974 adjusted personal income per capita and 1974 full value per capita by property class for each county. Income was mildly related to the value of all property and to the value of the commercial, industrial and public utility portion of the tax base (r = .43 and .46 respectively). However, the correlation between per capita income and the per capita value of the residential portion of the base was quite strong (r = .71) leading to the conclusion that, "...personal income is a good proxy for residential value."[4]

The Educational Testing Service compared median family income (MFI) from the 1970 census school district mapping project with 1974 property wealth as part of their study for the original plaintiffs in Levittown v. Nyquist.[5] Median family income was found to increase as wealth increased (see Tables 1 and 2 in Appendix A).

---

[3]John Callahan and Robert J. Goettel, "Regionalism in School Finance," in Joel S. Berke, Alan K. Campbell and Robert J. Goettel, Financing Equal Educational Opportunity: Alternatives for State Finance, (Berkeley: McCutchan Publishing Co., 1972).

[4]"Measuring the Wealth...," p. 22.

[5]Analysis of Data Contained in "School District Basic Fiscal Data, 1974-75," and "New York State Consolidated Data Base, 1974-75," Princeton; EPRI, Educational Testing Service, 1976.

The relationship between MFI and property wealth was also examined by Sacks, Wade and Goettel using 1970 census data and school district data for 1969-70.[6] The correlation between MFI and property wealth was .40, virtually the same relationship found by the ESU using county-wide data for 1974. However, the correlation was also adjusted to take into account the size of school districts -- larger districts have a greater influence on the correlation than smaller districts. By taking into account the size of districts we can make statements about how students, or taxpayers, in New York State will be affected as compared to statements about school districts. With size considered the correlation was -.14, which means that there is no relationship at all between MFI and property wealth. As the computer plot in Appendix B shows, the lack of correlation is very much a function of New York City's effect on the data.

Comparisons of New York City, other cities, suburban and non-metropolitan areas on per capita income and property valuation were also made by the ESU 1976 report, "Analysis of New York State's System of School Finance."[7] With size again taken into account the indexes of 1975-76 property valuation and 1970 per capita income were as follows:

	Full Value Per Pupil for 1975-76 Aid Apportionment	1970 Average Per Capita Income
New York City to Suburbs	1.61	.81
to Non-metropolitan Areas	2.29	1.23
Rest of SMSA Cities of Suburbs	1.07	.78
to Non-metropolitan Areas	1.52	1.18

[6] Seymour Sacks, Jerry Wade and Robert Goettel, "Poor Children and Poor School Districts," (Syracuse: Syracuse University Research Corporation, 1974).

[7] "Analysis of New York State's System of School Finance," (Albany: Education Study Unit, New York State Budget Division, October 1976), p. 139.

All the cities look wealthier than suburban and rural areas on property valuation. They are less wealthy than the suburbs when per capita income is the capacity measure, but still wealthier than rural areas.

The indexes for Full Value Per Pupil would probably be lower if current data were used since the tax base of city districts is growing more slowly than the rest of the state, particularly non-metropolitan areas. For example, between 1972-73 and 1975-76 New York City's valuation per pupil dropped from 74 percent to 46 percent higher than the rest of the state.

With the exception of Buffalo, each of the Big Five cities is wealthier on Full Value Per Pupil than the remainder of its standard metropolitan statistical area (SMSA), but less wealthy in terms of per capita income. Buffalo's property valuation per pupil is slightly lower than the remainder of its SMSA. The following table summarizesthese relationships.[8]

TABLE 1

FULL VALUE PER PUPIL AND AVERAGE PER CAPITA INCOME OF BIG FIVE CITIES COMPARED TO REST OF EACH STANDARD METROPOLITAN STATISTICAL AREA

Area	Full Value Per Pupil for 1975-76 Aid Apportionment	Ratio City to Rest of SMSA	1970 Average Per Capita Income	Ratio City to Rest of SMSA
Buffalo	$33,119	97%	$2442	73%
Rest of SMSA	34,318		3351	
Syracuse	43,633	155%	2586	87%
Rest of SMSA	28,179		2973	
Rochester	52,424	147%	2588	74%
Rest of SMSA	35,579		3504	
New York City	66,645	133%	3035	75%
Yonkers	66,813	133%	3829	95%
Rest of SMSA	50,237		4039	

[8] Ibid., p. 141

Since approximately three out of every four students in New York State live in the metropolitan New York, Buffalo, Rochester and Syracuse SMSAs, we would expect given these data that a per capita income adjustment to the measurement of fiscal capacity would shift aid from suburbs to city and to some rural school districts.

How do other income and tax base characteristics relate to MFI and property wealth? The second Syracuse study (Sacks, Wade and Goettel 1974) also considered the percentage of pupils below the poverty level, average housing value and an estimate of the portion of the tax base that is residential.[9] The correlations were as follows:

TABLE 2

	District Size Taken Into Account	District Size Not Taken Into Account
Equalized value and % of pupils below poverty level	.62	- .07
Equalized value per pupil and average housing value	.46	.54
Equalized value per pupil and estimate of residential proportion of tax base	- .72	- .59
Median Family Income and estimate of residential portion of tax base	.56	.26
Median Family Income and % of pupils below poverty level	- .72	- .65

These correlations show first that when size is taken into account, low income children -- and, therefore, low income families -- live in higher wealth school districts, the classical urban condition. On a

[9] Seymour Sacks, et. al.

district-to-district basis without accounting for size, there is no relationship between low incomes and property wealth. Second, the higher the property wealth, generally the higher the value of residential housing. Third, the higher the property wealth per pupil, the lower the portion of the tax base that is residential. This correlation is particularly strong when district size is taken into account (-.72%) Fourth, lower portions of residential housing in the tax base are also associated with higher median family income, though this correlation is only strong when size is taken into account. Basically this correlation confirms the notion that as income levels rise, homeowners tend to choose communities that are primarily residential in character. Finally, the higher the MFI the lower the concentration of pupils from low income families, a strong relationship that is as expected.

The final study concerning the relationship between property wealth and income in New York relies on estimates of total tax burdens for education (including state taxes) and benefits received for homeowners of different income levels in five districts with different levels of property wealth. Alexander, Melcher and Thomas compared twelve states including New York.[10] The principal value of their study is in the interstate comparisons rather than the ability to generalize their findings about the five districts to all of New York. Alexander et al estimated that their theoretical low, moderate and upper income New York taxpayers in the lowest wealth districts had total state and local tax payments for education about 15 percent less than taxpayers with the same incomes in

[10] Kern Alexander, Thomas Melcher and Stephen Thomas, "Income Redistribution Effect of Public Schools on Low-Income Families," Journal of School Finance, Winter 1979.

the highest wealth district. The higher the wealth, the higher the tax payments with income held constant. In only two of the other eleven states were the Alexander estimates of total tax payments for education lower in low wealth districts than in high wealth, and neither was as low as the 15 percent in New York. The two wealthiest districts used by Alexander et al were on Long Island, so the difference between the very poor rural district and the wealthiest is not surprising. On balance, tax rates, expenditures and wealth tend to be higher in the metropolitan New York City area than upstate.

In sum, higher levels of income are associated with (1) greater portions of residential property in the tax base, (2) higher values of residential housing, (3) suburban areas and (4) lower concentrations of pupils from low income families. Lower income levels, on the other hand, are associated with (1) city and rural areas, (2) higher portions of commercial, industrial and public utility property, (3) lower residential housing values and (4) higher concentrations of pupils from low income families. Depending on how the analysis has been handled, personal income and per pupil property values are either only mildly related or not at all associated. Higher property values are associated with higher portions of non-residential property. There is also the very tentative suggestion that when income levels are held constant, taxpayers in higher wealth districts, at least those districts that are in the metropolitan New York City area, will pay more taxes for education than residents of lower wealth upstate districts.

The key variable that has not been included in the above summary of studies about New York State is the property tax rate. Studies in other

metropolitan states like New York suggest that higher personal income characteristics of school districts are associated with higher tax rates.[11] We would certainly expect to find this pattern in New York given that higher incomes are correlated with higher portions of residential property and, therefore, with lower portions of commercial, industrial and public utility property that reduce the net price of a public service actually paid by the residents of a taxing jurisdiction. The extreme examples, of course, are industrial enclaves where a small portion of the tax base is in relatively low value residential housing owned by moderate to low income residents. A similar situation occurs in vacation areas of New York where a substantial portion of the residential property component is actually owned as second homes by non-residents. Both types of districts generally have low tax rates and, therefore, low property tax payments by district residents. In contrast, a number of districts in New York are relatively high in property value per pupil, high in the residential portion and very high in the value of residential housing. Such districts have high levels of personal income, high property tax rates and high tax payments by local residents. Such high preference suburban areas became the "lighthouse" districts of the 1950's and 1960's.

---

[11] See for example, Robert J. Goettel and A. Frederick Goossen, Financing and Administering Public Education in Ohio, (Syracuse: Syracuse Research Corporation, 1975).

Other States and Income in Measuring Fiscal Capacity

At least ten states currently use some measure of personal income to apportion general purpose state aid to local school districts. Table 3 presents information about the measures used in each of those states with the states grouped according to (1) whether the local districts have the authority to tax income, (2) whether income is simply used as an indicator of economic ability, or (3) whether a related factor is used such as the number of low income pupils or pupils from families that receive Aid to Families with Dependent Children payments. The only states to use taxable income per pupil or per capita to adjust the property tax base per pupil measure of fiscal capacity are the three in which revenues from an income tax are available to local districts. Maryland and Pennsylvania districts have access to a local income tax while Kansas districts have 15 percent of local payments to the State income tax returned for local use. In contrast, Connecticut and Rhode Island where income cannot be taxed locally, use the ratio of the local district's median family income to the state's median family income to adjust property value per capita.

Illinois, Minnesota and Ohio are not generally considered to be states that use an income related measure to apportion general purpose aid. Additional state aid is allocated to districts in Illinois and Minnesota for each Title I pupil. The state legislature in Illinois has resisted recent efforts to restrict the use of those funds only to economically disadvantaged pupils. Prior to 1975 Ohio apportioned additional general purpose municipal overburden funds to its largest cities based on the concentration of AFDC pupils in order to provide for the extra costs associated

TABLE 3

States That Use Personal Income
Measures in Apportioning School Aid

1. States where local school districts have legal authority to tax personal income.

   Kansas: 4 year average of adjusted property valuation and resident taxable income (15% of state income tax revenues raised from a locality are returned to the locality).

   Maryland: Combination of property tax valuations and taxable income per pupil.

   Pennsylvania: 50% property valuation and 40% personal income per pupil.

2. States where local school districts do not have the authority to tax personal income.

   Alabama: Multi-factor capacity index that includes income.

   Connecticut: Property valuation per capita modified by median family income index.

   Virginia: Multi-factor index that includes income (40% of income, 50% of property and 10% of sales tax bases).

   Rhode Island: Property valuation per capita modified by median family income index.

3. Other states where an income related factor is used to allocate general purpose state aid.

   Illinois and Minnesota: Additional apportionment is based on the number of Title I pupils.

   Ohio: General purpose aid apportioned as follows:

Percentage AFDE of Total Enrollment	Aid per ADM
10 - 14.99%	$ 7.50
15 - 19.99%	15.00
20 - 24.99%	22.50
25 - 29.99%	32.50
30 - 34.99%	47.50
35%	

with the special problems of urban school districts. But since 1975 all districts with greater than a 10 percent concentration of AFDC pupils are eligible for such aid, and a number of districts in suburban and rural areas in addition to the cities received the extra apportionment. Additional general purpose aid ranges from $7.50 for each pupil in those districts with 10-15 percent AFDC, to $67.50 per pupil for those with more than 35 percent concentration of AFDC pupils. Ohio also has a state supported compensatory education program similar to New York's PSEN or to Title I in which funds are restricted in use to educational programs for disadvantaged pupils.

1977 Taxable Income Per Pupil in New York

Table 4 shows the rank order and the district wealth relative to the state average for Full Value Per Pupil and Taxable Personal Income Per Pupil for 23 of the largest cities in New York State. The ratio of district wealth to the state average is the key number for both factors, since it indicates whether each district would gain or lose aid if income per pupil were used in place of, or to adjust, the Full Value measure of fiscal capacity.

Seventeen of the 23 city districts look wealthier relative to the state average on the income per pupil measure than they do on Full Value per pupil. These cities would lose aid if taxable income were substituted for property value, a finding consistent with the Division of the Budget study reviewed earlier. Four of the 23 districts -- Lackawana, Oswego, Schenectady and Ithaca -- would receive additional aid while aid to Oneida and Yonkers would remain the same.

The ratio of each district's income per pupil to the state average also could be used to adjust the Full Value Per Pupil capacity measure. If a district is wealthier on income than the state average, the ratio would be greater than 1.00, the district's fiscal capacity would increase and aid would be reduced. Fourteen of the 23 city districts have an income per pupil greater than the state average, and they would lose aid. Eight are below the state average, and they would receive additional aid. Buffalo at .98 would remain the same. Binghamton with a 1976-77 Full Value Tax Rate of 20.78, and Full Value Per Pupil 75 percent of the state average would be a major loser since its income wealth appears to be

TABLE 4

Full Value Per Pupil and Gross Income Per Pupil in 23 Cities

	Full Value Per Pupil		Taxable Income Per Pupil	
	Rank	Ratio	Rank	Ratio
Albany	128	.35	36	1.66
Binghamton	365	.75	47	1.52
Buffalo	417	.69	154	.98
Elmira	432	.67	266	.76
Lackawana	203	1.06	223	.82
Long Beach	142	1.27	60	1.41
Ithaca	173	1.16	121	1.08
Mount Vernon	289	.87	159	.97
New Rochelle	115	1.42	40	1.57
New York City	160	1.19	73	1.32
Niagara Falls	352	.77	170	.93
Oneida	697	.32	680	.31
Oswego	56	1.95	152	.99
Peekskill	410	.70	114	1.11
Poughkeepsie	246	.96	67	1.37
Rochester	243	.97	124	1.07
Rome	610	.51	318	.69
Schenectady	257	.93	120	1.08
Syracuse	293	.86	126	1.06
Troy	521	.59	127	1.06
Utica	497	.61	205	.86
White Plains	45	2.15	20	1.93
Yonkers	95	1.52	49	1.50

Source: "Selected Indicators of School District Wealth," New York State United Teachers, April 1979.

92 percent higher than the state average. Syracuse (FVTR 20.83), Schenectady (FVTR 17.44), Peekskill (FVTR 27.10) and Troy (FVTR 24.79) would be in a similar though not as dramatic situation. New York City would lose a large amount of aid since it appears to be 32 percent wealthier than the state average on income per pupil. Since Rochester's income also is above the state average, three of the four urban plaintiffs in Levittown v. Nyquist would be losers if income per pupil were used to modify Full Value Per Pupil as the measure of fiscal capacity and the fourth, Buffalo, would remain unchanged. Given the tax limits that face city districts, the ultimate effect of using taxable income per pupil could be the absolute reduction in services rather than an increase in local tax rates.

The effects of using taxable income per pupil are not limited to the cities. One-hundred and forty-eight of the 705 school districts would lose state aid if that factor were used to modify Full Value Per Pupil, and 98 of the 148 are in Nassau, Suffolk, Rockland and Westchester counties. Another eight are upstate cities in addition to New York City and the cities in the metropolitan New York area. If the concept of taxable income per pupil were a conceptually perfect measure of fiscal capacity, and the data were 100 percent accurate, the distributional effects nevertheless would be politically unacceptable. Fortunately, neither of those criteria can be achieved by taxable income per pupil, so the standard of political expediency need not be applied.

Poor measure of income. The question of a proper measure of personal income to be used in the apportionment of state aid will be discussed in detail later in this paper. Suffice it to say at this point that the

relationships among New York's cities, suburban and rural areas on taxable income per pupil are not consistent with the data summarized earlier in this paper. Both median family income (MFI) and per capita income are not only lower in cities than in suburban areas of New York, but cities look poorer on both income measures than they do on Full Value Per Pupil relative to the rest of the State. The reason for this inconsistency lies in both the accuracy of income data, and in the practice of dividing each district's taxable income by the number of pupils (or TAPU) in the district.

Poor data. Approximately 10 percent -- 682,000 out of approximately 7 million -- of the 1977 tax returns did not include the school district number as requested. Another 2 percent had numbers that did not match the county in which the return was filed. Of those returns that were complete in both county of residence and the school district number, no accuracy checks were made to determine the extent of errors. In general, the Department of Taxation finds a 5-6 percent error rate with respect to data provided by taxpayers.

The main question concerning the errors that have occurred in the first year's reporting of school district names and codes, is whether one can assume that errors are randomly distributed across all districts. Such an assumption is probably not safe. For example, the counties with the lowest percentage of consistency in terms of school districts matching counties were the five in the metropolitan New York City area (Nassau, Suffolk, Rockland, Westchester, Putnam). Plausible arguments can be made for higher error rates in sparcely populated rural areas, or in cities with high portions of elderly residents or transient low-income residents.

SECTION 3

USING PERSONAL INCOME DATA TO APPORTION STATE AID IN NEW YORK

Two questions must be examined in considering the use of personal income data in apportioning state aid to local school districts: What types of districts should be helped by such an adjustment? How should income data be used to target additional aid to those districts?

Which Districts Should Be Helped

When judging the probable effects of alternative state aid formula, pupil needs and taxpayer conceptions of equity compete with each other. The pupil needs conception of equity takes the position that access to educational resources should not be a function of the wealth, size, location, district type or personal income characteristics of districts. Pupils with comparable needs should be treated equally irrespective of where they attend school in New York State. A taxpayer conception of equity holds that taxpayers with comparable incomes should have comparable tax burdens throughout the State, and that those with higher incomes should pay more than those with lower incomes. This equity conception also holds that comparable tax effort among districts should result in comparable levels of educational resources, thus neutralizing district differences in wealth. Therefore, under a pupil conception resource levels would be a function of pupil needs while under a taxpayer conception they could be determined by district tax rates.

These competing conceptions of equity are difficult to balance perfectly through a state aid system that serves a large, complex, metropolitan state like New York. The State should have as its primary goal

the fulfillment of the pupil needs conception of equity. With respect to the use of personal income data, this means that where lower relative levels of educational resources and services are related to lower levels of personal income, additional state aid and/or local minimum tax requirements should be used to assure an increase in services comparable to State norms. Taxpayer equity can be addressed in two ways. First, individual property owners can be protected through an expanded excess property tax relief program -- the curcuit breaker. S cond, where tax rates are inordinately high compared to districts with comparable income and service levels, additional state aid should be used to reduce the overall burden for all district taxpayers. The personal income characteristics of district residents may be the best way to effect such reductions.

How Should Personal Income Be Used in the Aid Formula?

The two competing approaches to measuring fiscal capacity are the taxable capacity or tax model approach, and the economic indicators or income flow approach.

Taxable Capacity. This approach takes the position that the fiscal capacity of a local school district or any governmental unit is determined by the tax base(s) available to the unit and the yield of that base(s) at legally permissable rates of taxation. In the case of school districts and other local government units, the State must authorize the unit to use a tax in order to raise local revenues. In New York localities are authorized to use the property tax, some are permitted to use the sales tax and New York City is authorized to use the income tax. The equity principle of equals treated equally can only be achieved, it is argued, where local fiscal capacity measurement reflects the tax bases accessible to the local government unit. The capacity of a geographic region for the support of local functions may differ from its capacity to support state or federal functions because local units may not be able to tax all aspects of a region's wealth.

Arvid Burke, a frequent advisor to the Conference Board over the past several decades, summarized this line of reasoning more than a quarter century ago.

> Just as it is impossible in central finance to do more than approximate local fiscal needs, so it is impossible to determine precisely the fiscal ability of states or local units. Too frequently, it is assumed that there is a general type of taxpaying ability, such as income, which can be measured for purposes of financial equalization. If there is a definable general ability to pay taxes, it cannot be measured. Ability to pay taxes involves physical, psychological, and other factors which are difficult to define. Indeed, the budgetary

> process and the purposes of central finance impose conditions upon a satisfactory measure of local taxpaying ability that go beyond considerations of measurement of ability to pay taxes alone. For purposes of central finance, state or local taxpaying ability has to be defined in specific terms and to be administratively possible. Often these necessary practical approaches to the problem are confused with ascertaining the general fiscal ability of units of government.[12]

Economic Indicators Approach. In this approach fiscal capacity is a function of economic characteristics of a taxing jurisdiction and is not dependent upon the availability of various tax bases such as income, personal wealth, or consumption. No measure of wealth is considered to be satisfactory unless it correlates highly with income or related economic indicators, irrespective of the tax bases actually used. Since individual taxpayers pay taxes from their incomes, personal income is accepted as the best available indicator of individual ability-to-pay regardless of the tax being levied. Numerous studies in a number of states have shown that income is not closely correlated with the distribution of property wealth among school districts. Moreover, other studies have shown that income is the best single explanatory variable for government expenditures in general.

New York should rely upon the taxable capacity or tax model approach to determining school district fiscal capacity rather than the economic indicators approach. Since all but a few districts in the State have access only to the property tax base at the local level, this means that Full Value Per Pupil should continue to be the basic measure of fiscal capacity. However, in order to target additional general purpose state aid to districts with relatively low income levels and inordinately high tax rates, it may

---

[12] Arvid J. Burke, Financing Public Schools in the United States, (New York: Harper and Row Publishers, Inc., second edition, 1957).

be necessary to adjust taxable capacity with some measure of personal income as is done in Connecticut and Rhode Island.

In New York State low personal incomes are generally associated with low tax rates, but not necessarily low service levels. To some extent regional differences in personal income parallel differences in tax rates and expenditures. The income levels of individuals and of taxing jurisdictions must be understood in terms of the goods and services that can be obtained. "This is real income....It involves the price level of a particular market. Equivalent goods or services may be priced higher in high-income markets than in low-income markets."[13] Regional differences in teacher salaries in New York have a strong effect on differences in expenditure and tax rate levels. The lowest salaries are in non-metropolitan areas followed by upstate suburban districts. The highest salaries are in the metropolitan New York City area.

There are two important exceptions to the general relationship among personal income, tax rates and per pupil expenditures. First, the largest cities have lower median family income and per capita income than suburban areas, but city expenditures are not necessarily lower because they are in the same price market as suburban districts. Most city tax rates match or exceed the state average. Second, a number of non-city districts with very high portions of residential property have high tax rates but moderate or low-income levels. A general income adjustment to the Full Valuation measure of fiscal capacity that fails to consider the level of taxation of each district would simply shift state aid from high-cost to low-cost areas of the State.

---

[13] Burke, Ibid.

This suggests that a personal income modification of the measure of fiscal capacity used in the state aid formula should target more aid to districts with relatively low income levels that are fully using their available local taxing capacity, than to those districts whose tax effort is low relative to the rest of the State. Perhaps additional income-based state aid should only be apportioned to those districts whose median family income is below the state median and whose tax rate exceeds the state average or state median.[14]

An appropriate measure for adjusting taxable capacity in order to reflect important income differences among districts will reflect the distribution of personal income, not simply the aggregate that theoretically is available in a district. A distributional measure tells us something about a district's taxpayers. Median family income is such an example because we know that half a district's residents have incomes above the figure, and half below. The portion of residents below a given level, say, the poverty level is another example. In contrast, average income, or income per pupil or income per capita can be strongly influenced by the particularly high incomes of a few residents, and ignore the condition of the majority of residents. Whenever the total income of an area is divided by the number of residents (or taxpayers), the resulting average will always be higher than the median figure. For example, only 148 of the 705 districts in New York State are above the state average income per pupil, largely because one of those 148, New York City, is very large and 32 percent above the average. In short, the state average is closer to the 20th percentile, a great distance from the median. The

[14] The question of how extensively property taxpayers in the various areas of New York State are over-burdened has an important bearing on this entire discussion: One basis for answering that question is an examination of property tax circuit breaker forms included for the first time in 1978 income tax returns.

same condition exists when the incomes of the residents of a taxing jurisdiction are measured. It is of particular concern in large cities where the distribution of income tends to be bimodal -- large numbers of both upper and lower income residents, but relatively few in the middle income range. An average income figure makes the residents of the city look considerably wealthier than they are, just as the state average income per pupil makes New York's school districts look like they have far more income than is the case for about 80 percent of the districts.

Median family income is not, of course, available from New York State income tax returns. The closest measure to approximate MFI would be median taxable income per family which would require combining the returns of husbands and wives, and then rank ordering the combined results for each school district. The Department of Taxation and Finance has the computer capability to perform this task as long as the combination is limited to husbands and wives. Additional income earners in a family would be treated as separate families. The median income per return also could be determined by not bothering to combine the incomes of husbands and wives. The combined approach is preferable, however, since (1) about half the families in the United States have a second wage earner, and (2) property taxes are paid out of the combined income of both family wage earners. Finally, the average income per tax return, a concept similar to per capita income, could be used. As noted above, such a factor is not an adequate measure of the distribution of income among the residents of a school district.

The major problem with the use of New York taxable income -- in addition, of course, to the accurate reporting of school district names

and codes -- is with the income not considered to be taxable. A major share of nontaxable income is derived from Social Security or Railroad Retirement funds and public assistance payments. (New York State residents who file for excess property tax relief must include those income sources in calculating their eligibility for and their amount of state reimbursement.) When these two sources of income are not included, large numbers of low income citizens are not counted in determining median taxable income per family. Since urban districts have larger concentrations of retired and public assistance citizens than do most suburban or rural areas, the use of median taxable income per family would make the cities look somewhat wealthier relative to the rest of the state than would the United States Census definition of median family income. The same would be true if a median or average taxable income per return were used.

We currently have no indication of how measures such as median taxable family income, median or average income per return would affect the relative wealth of urban, suburban or rural school districts. Would the relative wealth of each type of district more closely match the taxable income per pupil data, or the Census' median family income or per capita income used by the New York State Department of Commerce? Such questions can only be answered by an empirical examination of the 1977 and 1978 tax returns.

If New York State income tax data are not used to modify Full Value Per Pupil in determining the fiscal capacity of school districts, what other source of income data is available? One source, of course, is the U.S. Census of Population and Housing data apportioned on a school district

basis through a complex mapping process. It was these data for New York State that were used in the Budget Division's study of the effects of using income as the measure of fiscal capacity and in the Wade, Sacks and Goettel analysis of the relationship among various income measures and full value per pupil. Analysts consider the Census data for school districts to be quite adequate for research purposes -- the objective of both the DOB and Wade studies -- but not sufficiently accurate to apportion state aid among districts. The question we probably should be asking, however, is how do the errors that characterize the Census school district data for New York State compare to the minimum five percent errors (assuming careful auditing) likely to continue in the State income tax data? Neither data source is perfect; but whichever is likely to have the least critical errors should be the subject of careful examination. Perhaps the trade-off is between the annual availability of the State income tax data compared to the once every five years Census data (beginning in the 1980's) and the more comprehensive measure of median family income found in the Census. In any case, given what is certain to be a high administrative cost for auditing the State's income data, consideration should be given to the Census alternative.

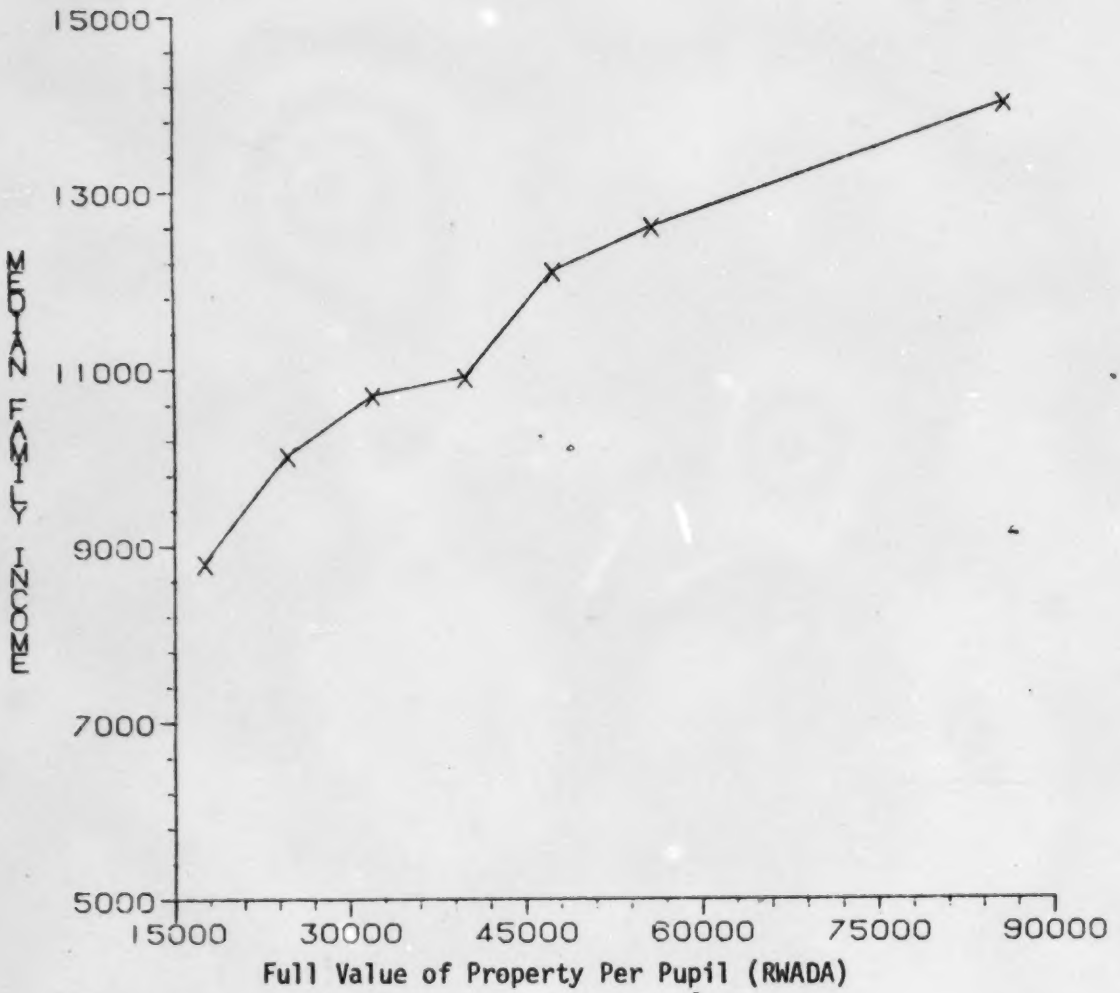
A second alternative to State income tax data is the annual availability of Title I children or AFDC families for each school district. These data could be used in the same manner as median taxable family income by comparing each district's ratio of low income residents or children to the state average and using the resulting figure to adjust Full Value Per Pupil, or, like Ohio, to simply apportion additional aid per pupil based on the concentration of low income pupils. This alternative

might seem to be quite different from the measures of relative income discussed at length in this paper, but they are income-related vehicles that would distribute additional aid to poor rural areas as well as to urban school districts.

APPENDIX A

Figure II-2

THE RELATIONSHIP BETWEEN MEDIAN FAMILY INCOME AND FULL VALUE OF PROPERTY PER PUPIL (RWADA)



Source: Official New York State Education Department data compiled and analyzed by Education Policy Research Institute, Educational Testing Service, Princeton, New Jersey

This relationship is even stronger when the higher valuation category is further subdivided to reflect the large variation within this group. These extended intervals are included in selected tables in the remainder of this chapter.

Table II-4A

THE RELATIONSHIP BETWEEN MEDIAN FAMILY INCOME AND FULL VALUE BY REFINED INTERVAL CLASSES

Full Value Of Property Per Pupil (WADA)	Median Family Income
Under $20,000	$ 8,818
$20,000-$27,999	10,030
$28,000-$35,999	10,707
$36,000-$43,999	10,913
$44,000-$51,999	12,100
$52,000-$59,999	12,603
$60,000-$67,999	12,567
$68,000-$75,999	13,293
$76,000 and above	14,742

Source: Official New York State Education Department data compiled and analyzed by Education Policy Research Institute, Educational Testing Service, Princeton, New Jersey.

APPENDIX B

CHART 4

MEDIAN FAMILY INCOME AND FULL VALUATION PER PUPIL